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ABSTRACT

America's public education is often cited as an example of America's commitment to equality, yet it is supported primarily at the local government level, the level least able to further the redistribution of wealth. Data in the Coleman Report, misrepresented in the report itself as indicating that schools have little effect on the development of verbal ability, actually indicate that the redistributive effects of education in the northern United States are not strong. These effects were tested in a study of 121 urban school districts and 166 suburban school districts in the Chicago standard metropolitan statistical area. The results indicated that central city districts tend to be redistributive while suburban districts tend to be developmental in their handling of community wealth. This is apparently due to the homogeneous nature of suburban school district populations. Suburban districts can tailor their taxation levels, zoning requirements, and public services to appeal to a specific population with reasonable efficiency. Urban districts with more heterogeneous populations must provide standard, uniform services (including education) to all residents, regardless of socioeconomic station, with inefficient use of tax revenues (based on the ratio of taxes paid to services received by each individual taxpayer) the usual result. (Author/PGD)

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Developmental Versus Redistributive Policies in Central City and Suburban Schools

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Paper presented at the annual meetings of the American Educational Research Association, San Francisco, California April 8, 1979.

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DEVELOPMENTAL VERSUS REDISTRIBUTIVE POLICIES IN CENTRAL CITY AND SUBURBAN SCHOOLS

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Schooling is the most costly of all local government activities, and its operations touch directly on the lives of many, if not most of the families living within the community.* How a city operates its schools can significantly affect the equality with which educational opportunity is provided in the society. The two objectives run at cross purposes with one another. Local governments have a primary interest in developing their local economy, whereas equality of education implies a redistributive set of public services which local governments are unable to execute. I shall show that the limited amount of redistribution presently provided by local schools is concentrated particularly in central cities. By comparison, suburbs pursue a developmental strategy. As a result, central cities suffer the adverse economic consequences of even limited efforts at redistribution.

Local Government and the Local Economy

When forced to choose between redistribution and developing the local economy, local governments in a federal system place the greater weight on economic development. This choice is not due to a local power elite or to the biases inherent in small constituency politics; instead, it is a function of the external socio-economic context in which local governments operate. Unlike national governments, localities have little control over external socio-economic forces. Just as the individual firm in a competitive economy cannot control its sources of supply or the demand for its products, so local governments cannot control the movements of capital and labor across their boundaries. They do not issue passports or visas, and they cannot levy tariffs or regulate rates of currency exchange. They are open systems which can be easily permeated by external forces, and therefore they are particularly sensitive to environmental constraints. In responding to these external forces, local governments act to protect the community's economic interests. Just as the private firm wishes to maximize its profits, so the local community seeks to maximize its economic well-being.

In attempting to maximize their economic prosperity, local communities are in a competitive position with one another. Each must attract productive capital and labor to their area, and to achieve that end the conditions for productive economic activity must be as favorable in the locality as in its competitors. Otherwise, there will be a net outward flow of productive resources, leaving the community with a declining economic future. Since local governments can do little directly to control the flow of productive resources, it is all the more important that their service-delivery systems be designed in such a way as to protect and enhance the productive capacity of the area.

In attempting to maximize this objective, local governments must provide services in such a way that benefits received correspond to

taxes paid. Of course, this can never be done with perfect efficiency. People in a community do not agree on what they want, yet there must be some uniformity in the package of government service provided. Secondly, there will always be some inefficiencies in the administration of public services; for one thing, there is no pricing mechanism that allows for quick identification of inefficiencies. And finally, constitutional constraints preclude taxation that is carefully calibrated to the amount of services received. As a result, the higher-paying taxpayers always pay more in taxes than they receive in services.

The benefit/tax ratio for the average taxpayer is thus always less than 1.0. The person who pays the mean dollar in taxes always receives less in benefits than he pays in taxes. Moreover, the greater the redistribution in government services, the lower the benefit/tax ratio.[1] In other words, the more egalitarian the provision of public services, the fewer benefits the average taxpayer receives as a proportion of the taxes that he pays. But if the benefit/tax ratio falls lower in one community than in others, then the above average taxpayers have every incentive to leave the community and live elsewhere. At the same time the community attracts those in need of redistributive services. Over time this adversely affects the economic well-being of the community.

At the local level one can thus usefully distinguish between developmental policies, which enhance the economic well-being of the local community by providing services roughly in proportion to the economic demand for them, and redistributive policies, which provide services needed by those paying few, if any taxes (but which nonetheless endanger the local economy). Significantly, these redistributive policies are seldom financed by local levels of government. Instead, most welfare, housing and health programs that have a redistributive impact are financed at either the state or national levels.[2] Local

governments concentrate on services, such as police, fire, garbage collection, and street maintenance, that not only benefit all members of the community but probably benefit the more prosperous members to a greater extent than they do the low-income residents.

The consequences of the local interest in developmental rather than redistributive policies are particularly significant for schooling. Although Americans are said to have placed a particularly high premium on equality of educational opportunity,[3] they have also stressed the importance of local financing and local control of the educational system. Whereas in most European countries schools are financed heavily by the national government, in the United States 80 per cent of educational financing is by state and local governments.[4] The elementary and secondary sector is particularly the prerogative of local government. Ironically, the service-delivery system which is said to best exemplify America's commitment to equality is provided by a level of government least able to engage in redistribution.

Education: Developmental or Redistributive?

Schooling, of course, is not necessarily a redistributive policy. One can imagine a school system distributing educational services in a fashion so consistent with the economic interests of the city that one would properly classify it as a developmental policy. Consider a system of schooling such that services are provided to those families who exchange for them a sum of equal market value. Because the family is willing to pay for the schooling, and because those providing the schooling are willing to do so in return for this payment, the exchange increases the net utilities of the community. Everyone is better off than they would have been without the exchange - the very definition of developmental policy. Following Pareto, one might also label such a system an efficient system of education. Within this efficient system

of education, those paying the most for school services receive the most in benefits.[5]

A redistributive school system, on the other hand, provides similar school services to similar children. All children (except perhaps the handicapped) in any given age cohort are regarded as equivalent to one another. Each child receives the same educational benefits, regardless of his family's income, social position or contribution to local tax coffers. In short, schooling services can be classified as more of a developmental policy or more of a redistributive policy, depending on the degree to which the benefits of schooling are distributed either in proportion to the amount paid for the services or equally to all members of the community.

Measuring educational benefits requires that one assess the effects of schooling, one of the most researched and yet most evasive problems in the social sciences. The single most massive, comprehensive and thoroughly reviewed data source on American schools is that collected and analyzed by the U.S. Office of Education under the direction of James Coleman, hereinafter referred to as the Coleman study.[6] Findings based on this study allow the conclusion that the American school system in the 1960s was only mildly redistributive. Although benefits were not distributed strictly in accord with the amount paid for schooling services, the redistribution that took place was marginal.

Coleman's study takes as its primary measure of educational benefits the child's capacity to perform well on verbal ability tests. In my view, performance on this test is quite a good indicator of what many people expect from schooling - the capacity to communicate effectively with others - both orally and in written form. This capacity is not only valuable in itself, but it is necessary for achieving other valued things, and, in any case, is a good proxy for many other capacities that school systems have the wherewithal to impart.[7]

One can determine the extent to which educational services are efficient contributors to the productivity of the local economy by identifying the strength of the relationship between a child's performance on a verbal ability test and the amount a family pays for the child's schooling. In a system efficiently contributing to the local economy, the correlation between a child's performance and family payments for educational services increases the longer a child remains at school, as differentials steadily increase between children from those families who pay more for educational services and those who pay less. Nineteenth Century school systems in Europe may have approximated this ideal. Had surveys of the verbal ability of school-age children been conducted in those days, they would very probably have shown increasing differentials in the performances of those whose families paid for schooling and the performances of those who did not.

The degree to which an educational system is redistributive is revealed by quite opposite relationships between educational benefits and family background. In a redistributive system, performance on verbal ability tests is only weakly associated with family background, and whatever variation in verbal ability is initially associated with family background characteristics steadily declines over time, as the redistributive impact of the school offsets whatever initial inequalities are present.

In brief, when education is a developmental policy, schools reinforce and increase initial differences in child performances correlated with differences in the amount families pay for schooling. When education is a redistributive policy, schools act independently of and eventually eliminate differences in child verbal ability associated with socially structured differences in family background.

A Marginally Redistributive System

When analyzed with care, the Coleman data reproduced in Table V-1 reveal a school system that is only marginally redistributive. The table presents data only for northern blacks and whites in grades six, nine and twelve, because data collected for the South, other minorities, and for younger children is of a more dubious quality.[8] This table reports the central findings from the Coleman study: 1) family background characteristics have a strong impact on verbal ability at all grade levels. 2) School and teacher characteristics make the most minimal "unique" contribution; they have little effect separate and apart from conjoint effects the school factors share with the child's family background.

The familiar interpretation given this table is that schools make little difference. At first glance the data seem to show that schools have little effect on children one way or another. It is difficult to classify school policies as either redistributive, developmental, or allocational because they have little consequence at all.

This reading of Table V-1 has several difficulties. For one thing it is insensitive to the precise meaning of the statistical techniques employed. In interpreting tables such as this one it is important to keep in mind that in a multivariate regression analysis, explained variance in the dependent variable (in this case, verbal ability) consists of three things: x) the variance uniquely attributable to independent variable a (family background); y) the variance uniquely attributable to independent variable b (teacher and school characteristics); and z) the variance that can be attributed only to their conjoint or overlapping effects. In Table

Table 1. Percent of Variance in Verbal Achievement Accounted For by Family Background and School Characteristics for Grade 6,9,12.

	Grade 6	Grade 9	Grade 12
Family Background (Includes Unique effects as well as those effects produced conjointly with school variables)			
Blacks (North)	9.51	7.68	7.53
Whites (North)	14.10	16.49	14.28
School Teacher and Characteristics (Variance Uniquely Accounted for, once family background characteristics are controlled)			
Blacks (North)	2.66	3.32	6.68
Whites (North)	2.02	2.06	3.16

Data selected from Coleman, et al. Equality of Educational Opportunity, Tables 3.221.3 and 3.25.3.

V-1, as in all of the tables in the Coleman report, the data is divided into only two, not three, of these analytical parts. Rows 1 and 2 contain combined information about x and z above: they combine the unique effects of family background with the conjoint effects family background shares with school effects. Rows 3 and 4 provide information about y - the amount uniquely attributable to teacher and school characteristics.

When the analysis is conducted in this way, the amount of variance "uniquely" explained by school characteristics is a poor measure of the impact of schooling on a child's verbal ability. Any effects of schooling that overlap effects of family background are attributed entirely to the family and not at all to the school. Such overlapping effects may be considerable. For example, teachers can be expected to allocate their time and energy in a way that yields the most immediately productive results. For this reason, they are likely to prefer working with those pupils who respond the most readily to instruction and whose work improves most markedly under their supervision. It would be quite surprising if middle class children (whose home and school environments have more in common) were not more likely to respond readily to teacher stimulation than their working-class peers. If this occurs, then resources within schools may very well be allocated in ways that are strongly correlated with the social standing of families. Teachers work more with middle class children; the nature of interactions with such children are more rewarding for both teacher and pupil and these interactions become increasingly positive and reinforcing. The converse is likely for working-class children.

Although such relationships are likely, they do not appear as school effects in Table 1. On the contrary, these school effects only increase the size of the correlation between family background

and verbal ability reported in this table. Because all overlapping effects are treated as family effects, these probable school impacts are erroneously considered to be the result of entirely non-school influences.

The problem is compounded by the fact that Coleman was only able to collect crude measures of school variables.[9] By and large, only differences among schools and among school districts were available to this study. Coleman thus had little information on differential allocation of school resources to pupils within a single school building. Yet 80 per cent of the variation in pupil performance on verbal ability tests occurred within schools, leaving only 20 per cent of the variance to be explained by the school factors Coleman was able to isolate. It is therefore especially probable that differentials in the allocation of school resources overlapping differences in family background escaped the attention of the Coleman study. Whenever this occurred, these unmeasured school effects contributed to the size of the correlation between family background and verbal ability.

Recently several studies have identified within-school effects that overlap differentials in family background. In careful analyses controlling for relevant variables both Heyns and Alexander and McDill have determined that tracking within schools provides pupils with differential access to school resources, contributes to differential performances on school tests, and is associated with differences in the class background of pupils.[10] As Alexander and McDill conclude "... curriculum differentiation may be instrumental in maintaining status advantages and disadvantages through the educational system ... [The] sorting and selecting processes within schools may be implicated intimately in both educational and societal stratification systems."[11] These studies, like the Coleman study,

depend on cross-sectional data and have only crude measures of within-school differentiation in the allocation of school resources. The work by Summers and Wolfe is therefore particularly interesting, because these authors had access to time-series data, could identify many specific within-school influences, yet were able to introduce appropriate controls for race, family income and I.Q.[12] In their study of Philadelphia schools they found that once the complex effects of school variables were specified, race and income had no independent effect on the increment in achievement between grades three and six. Instead, a significant number of teacher and school characteristics affected performance levels, though in ways not easily detected by studies that do not have access to pupil-specific information about resource allocation.

When these studies are taken into account, it becomes quite clear that the data reported in Table 1 tell us little about the overall impact that schools have on children's verbal ability. But they nonetheless contain valuable information. First of all, the relationship between family background and verbal ability tells us something about the extent to which educational benefits are being distributed roughly in accord with the amount families pay for schooling. Although Coleman does not provide direct information on the amount parents pay in taxes for their children's education, the family background variables (which are fairly accurate indicators of the family's social status) probably have a strong, positive relationship with the amount the family pays in taxes for schooling. In the mid-1960s schools were financed largely by local property taxes and state sales taxes. Although both taxes are probably somewhat regressive in that lower-income families paid a slightly higher percentage of their income in these taxes, the amount of taxes paid increased with income. A nationwide study of the incidence of the

property tax in 1960 shows that tax payments increased steeply as income levels increased.[13] In Table 2, which reproduces these findings, one can see that the two highest income categories paid nearly eight times in property taxes what was paid by the two lowest categories. Significantly, it was these higher income families paying more in property (and other) taxes whose children received the most in benefits from schooling. The size of this relationship is only modest, of course, and therefore school policies do not contribute as much to local economies as one expects from a purely developmental policy. But neither is there evidence here of a shift in benefits from the "haves" to the "have-nots".

Secondly, the "unique" amount of variance attributable to schools provides another indicator of the redistributive impact of schooling. Any effects of schooling that do not overlap family background are likely to be redistributive effects. If a school system is shifting resources from above average taxpayers to the children of less well-endowed families, then this is likely to appear in the form of significant school effects that are uncorrelated with family background characteristics. Table 1 shows that these "unique" effects of teacher and other school characteristics accounted for less than 4 per cent of the variance in verbal ability in 5 of the 6 samples.[14] From these results, one may also conclude that schools make only a small contribution to equality of educational opportunity. Any redistributive impact of schooling seems very limited.

One can also estimate the degree of redistribution occurring through the schools by looking at changes over time in the relationship between family background and verbal ability. As Table V-1

Table 2. Family Income, Property Taxes Paid and Public School Benefits Received in the United States, 1960.[1]

Income	Property Tax	Public School Benefits[2]	(N)
Under $1,000	$ 29	$ 54	(127)
$1,000-1,999	36	79	(281)
2,000-2,999	68	145	(271)
3,000-4,999	93	185	(522)
5,000-7,499	116	250	(610)
7,500-9,999	187	309	(330)
$10,000 and over	270	239	(245)

1 Data selected from Morgan et al. Income and Welfare in the United States, pp. 296, 304.

2 Educational benefits received are greater than property taxes paid, because schooling costs are also covered by sales and income taxes as well as by taxes on commercial and industrial property.

shows, this relationship "is approximately constant over grades 6 to 12 for both Negroes and whites."[15] Coleman concludes from this fact that schools have almost no effect on verbal ability at all. "The absence of a steady decline in this relation over time", he states,

> indicates that schools do not constitute an important modification of the child's environment to interrupt the family processes that in the absence of school would be expected to show the same constant correlation with [verbal ability] that they now show.[16]

Coleman has no warrant for such a conclusion, for he cannot establish the fact that family processes would have produced these same correlations in grades 9 and 12 in the absence of schooling. It follows from the argument advanced earlier that some of the relationship between family background and verbal ability in grade 6 was in part due to the correlation between family background and unmeasured (but class-biased) school characteristics (of perhaps the sort I have described). To whatever degree these factors affected relationships at grade 6, to that same degree the continuing impact of these class-biased school characteristics is necessary for maintaining a stable correlation between family background and schooling.[17] In other words, the stable relationship between family background and verbal ability over time provides no evidence for the inefficacy of schooling, as Coleman implies. The only thing that can be concluded from the "absence of a steady decline" in the relation over time between family background and verbal ability is that whatever effects schools have overlap class differences in family background.

At the same time the school system does not contribute to the local economy with perfect efficiency. If public school systems had pursued strictly developmental policies, the relationship between

family background and verbal ability presented in Table 1 would have steadily increased the longer the child remained in school. The independent contribution of school characteristics (separate and apart from any overlapping effects they shared with income-related differences among families) would have disappeared altogether. The relatively stable relationships between family background and verbal ability that do occur could have been produced within a school system efficiently developing its economy under only one extreme circumstance. Only if all the correlation between family background and verbal ability in grade 6 were due to correlated differences in the allocation of school resources (and not at all due to characteristics endogenous to the family), would a school system efficiently developing local economies have failed to produce an increasing association between family background and verbal ability in later years. That extreme assumption is no more warranted than the opposite extreme assumption (hidden in Coleman's argument) that there are no correlations between effective school characteristics and family background.

Given the limits on the data Coleman collected, the exact impact of schools on children's verbal ability cannot be determined. But whatever their size, three considerations suggest that further research will show schools to be only modestly redistributive in their impact. First, correlations between the benefits schooling provides and the class standing of families is fairly strong. Secondly, this relationship is fairly stable over time. Thirdly, effects that can be attributed "uniquely" to schools are relatively small. None of these patterns would obtain were schooling a highly redistributive service.

The Dual System of Education in Metropolitan Areas

Taken as a whole, these findings for northern parts of the United States suggest that only a marginally redistributive system existed in the 1960s. Yet there were - and remain - great differences in the arrangements for schooling in different parts of the country. In particular, central-city school systems differ from the suburban system that surrounds them. As a result, a dual system of education has emerged in metropolitan areas. The part located in central cities has become a modestly successful agency of redistribution. The other, located in a vast array of small suburbs, is organized is such a way as to better facilitate developmental objectives. The imbalance between the social objectives pursued by this dual system of education contributes to the contemporary urban crisis and precludes further contributions to equality by central-city school systems. Significantly, what can be said for education can probably be said for many other locally provided services.

Developmental policies in suburbia. Consider first the system of education provided in American suburbs. A wide variety of competing school districts provide a range of educational services of varying quality, varying emphases, and varying prices. Consumers are provided a range of alternatives in selecting the school they most prefer. Those who have a high demand for high-cost education, and the necessary financial resources to make their demand effective, purchase homes or apartments in communities that have nationwide reputations for excellent schools. Those with less effective demand (i.e., have less interest in high-cost education or lower incomes) choose homes in less exclusive parts of the metropolitan area. At the bottom are "problem" suburbs where schooling benefits are much less but so is the cost of

purchasing or renting living space. Tax rates also vary from area to area, depending on per capita taxable wealth and the effective demand for schooling. Altogether, the system, though far from Tiebout's ideal of perfect efficiency,[18] dispenses benefits roughly in accord with the amount of taxes paid for them.

Two separate research traditions have generated evidence that lends some credence to those who believe that suburban educational benefits are distributed roughly in accord with economic demand for them. Because schools are locally financed, there is great variation in expenditures among school districts. For example, Miner found in a national sample a coefficient of variability of .72 among school districts in expenditures from state and local resources.[19] Moreover, both Miner and other researchers discovered that these differences were strongly related to the fiscal capacity of the state and locality.[20] More recently, Grubb and Michelson have demonstrated that interstate inequalities remained relatively constant from 1955 to 1968,[21] Even the increased federal role in educational finance has done little to reduce inter-state differentials. They also show that within states substantial inequalities among school districts were evident in all fifteen of the states they investigated.[22]

These inter-district expenditures are also related to the fiscal capacity of families. Those with more income are located in districts where expenditures are greater, and as a result those who have more effective demand for education receive more educational benefits (as measured by expenditure data). As can be seen in Table 2, the results of a survey of families in 1960 showed that just as property taxes paid increased with income, so did educational benefits received. Of course, these data did not provide information on the exact expenditures spent on the individual children of the families surveyed; instead, it was assumed that these children received a resource allocation identical to that of the average child in the district

they attended. The data therefore are probably a conservative statement of the extent to which family income and educational benefits are related. However, they provide a clear demonstration that the great variability in expenditures among school districts contributes to differentials in educational expenditures across income groups.

These data were collected on a nationwide basis. Evidence on patterns specific to suburbia are available only for particular metropolitan areas. In an early study, Hirsch found that variations in local property values were the most important determinant of school expenditures in the metropolitan area surrounding St.Louis.[23] Sacks and Hellmuth found that indicators of the personal wealth of the community affected the expenditures of suburban districts near Cleveland.[24] Studies of the Chicago and Santa Clara, California suburban areas also found per capita income and property values to be important determinants of expenditure.[25] In general, those suburban communities with greater economic resources provide for a financially more luxurious educational experience for district children. Those who pay more in taxes receive more in educational benefits, as measured by per pupil expenditures.

A second tradition of research on educational services provides information on the degree to which suburban families value the products local school systems are providing. This research has shown, first of all, that educational benefits, as measured by tests of verbal ability, have a value in the marketplace. Two separate studies - one of New Jersey suburbs, the other in the Los Angeles area - demonstrate that as performance on verbal ability tests improves, so do the property values of the community.[26] In both studies many other factors affecting property values, such as the size and age of the home, the accessibility of the community

to centers of employment, the community tax rate, and most important, median family income, were controlled in a multiple regression analysis. Given the control for family income, one cannot explain away the finding on the grounds that communities with high property values produce children who perform well on tests. Apparently, consumers of educational services believe that schools do affect the performance levels of children, and they place a higher value on those schools where children learn more.

There is a second finding in this research tradition which suggests even more clearly that suburban school systems are reasonably efficient at promoting local economies. When educational benefits are measured by expenditure levels and not by test scores, school services continue to have a positive effect on property values. Significant positive effects of educational expenditures on property values have been identified in suburban communities in New Jersey, Massachusetts, and California.[27] In all these studies, the findings held after controls for median family income, tax rates, home age and size, and other relevant variables had been introduced.

Educational expenditures have a positive effect on property values, because consumers perceive some relationship between dollar inputs into education and the outcomes of schooling. Admittedly, the utilization of resources seems to be less than perfectly efficient for promoting economic growth. In most studies the positive effect of educational expenditures at best merely offsets the negative effects of the requisite local taxes. Moreover, educational expenditures generally do not have as significant an effect on property values as do verbal ability test scores, suggesting some slippage between educational input and output. But even with these qualifications, there is a reasonable amount of evidence that suburban educational systems promote local economies. A varied set of school offerings are provided, therefore

allowing purchasers of these services to locate in areas where services best match their effective demand. The amount of educational services provided (as measured by expenditure levels) varies positively with family income. The outcome of schooling, as measured by verbal ability scores, affects property values. Even more significantly, there is considerable evidence that expenditures on education are positively valued by the marketplace. Suburbia may not yet approximate Tiebout's ideal world of the perfectly efficient system for distributing public goods, but at the very least market forces respond as if consumers value the things suburban governments provide.

Redistributive policies in central-cities. If suburban schools have developmental policies, central city schools in the dual system of metropolitan education lean more in a redistributive direction. Big city school systems fall within a single large school district governed by a central board of education, which has delegated most of its powers to a highly centralized administrative staff. Ironically enough, these administrators, in the name of efficiency, have rigorously applied principles of equality and fairness to the distribution of resources among neighborhood schools within the central city.

As part of the reform of big city education, school administrators took politics out of the administration of local schools and, partly to enhance their own power, developed universalistic rules for the distribution of scarce school resources.[28] All schools were allocated similar teacher/pupil ratios, similar classroom sizes, similar textbook/pupil ratios, similar extra-curricular facilities and supplies, and so forth. Variation and diversity encouraged political pressures by principals, community groups, politicians and board members. Generalized principles for the distribution of school resources protected administrators against pressure, enabling them to claim that every pupil

was being treated equally and fairly. These principles also provided for a certain kind of efficiency that the accountant could appreciate, though the efficiency of the central-city school administrator had nothing in common with the Pareto-optimal efficiency about which economists write. On the contrary, it helped to insure a far greater equality in educational provision in the city than almost any theory of community power might have anticipated.

Only a few systematic studies of the allocational policies of big city school systems have been published, but the findings are surprisingly consistent. In several cities scholars have found a replication of the pattern Burkhead found both in Atlanta and in the Chicago of the supposedly racist Superintendent, Benjamin Willis.[29] In this machine-ridden city, the school resources were distributed even-headedly to all segments of the social structure, so that expenditures per pupil, teacher/pupil ratios, expenditures for supplies, and most other items of resource distribution were approximately the same. When Katzman compared his results to those of Burkhead's he concluded that "The three cities (Boston, Atlanta and Chicago) are strikingly similar in the relatively equal distribution of expenditures per student".[30] Levy et al. also found a rough equality in the distribution of resources in Oakland, California.[31] In this case, however, there was a tendency to allocate extra resources to schools in both the poorest and the richest neighborhoods. If these four cities from all regions of the country are at all representative, then Katzman is surely correct in concluding that "... big cities more effectively narrow the gap in educational opportunity than do the multitude of autonomous suburbs."[32]

The one exception to this pattern is the differential in teacher salaries among central-city neighborhood schools. Burkhead, Owen and Grubb and Michelson all find differentials in expenditures among

neighborhoods that are the product of "allowing experienced teachers to choose in which school they wish to teach, resulting in the most experienced (and highest paid) teachers concentrated in white middle-class schools".[33] Yet there is little evidence that experience beyond the first four or five years of teaching correlates positively with pupil performances.[34] If this is the primary mechanism by which central cities bias school resources in favor of higher tax-paying neighborhoods, they have chosen a most inefficient mechanism for relating service delivery to tax contributions. By comparisons, salary differentials in suburbs enable the more prosperous suburbs to recruit the more talented teacher from the very beginning of his career in the community. But even taking into account differentials in teacher salaries among central-city neighborhoods, within-city differences do not match inter-city differences. In Owen's words, the "... income elasticity of salary expenditures [within central cities] ... is about half of some estimates of intercity elasticities of educational expenditures."[35] This provides a "rough measure of the extent to which centralized administration of large-city educational systems has reduced inequality based on income differences."[36]

To the extent that central cities provide equality of educational resources, this comes at the expense of the development of the big city economy. Those who pay more in taxes for schooling in central cities may not receive much more in benefits. Instead, the more prosperous families living in the central city are subsidizing the education of their poor neighbours.

Education and property values : An empirical test. Given these central-city-suburban differences, Susan Sherman and I hypothesized that educational expenditures are less likely to have a positive effect on the property values of central city homeowners than they do on the values of their suburban counterparts.[37] To test the hypothesis we

decided a direct comparison between central cities and suburbs was required. Data was collected for two separate samples for the year 1970. The first sample consisted of the 121 central cities in the continental United States, whose population size was 100,000 or more and whose school district and municipal boundaries substantially overlapped. The second sample consisted of the 166 suburban municipalities in the Chicago SMSA for which data could be conveniently collected. A description of variables and their sources is provided elsewhere. [38]

Because numerous factors besides educational expenditures affect property values, it was necessary to control for other variables in a multiple regression analysis. We controlled for population size, median family income, percentage of new homes in the community, and the size of the home. In the suburban analysis we also controlled for access to employment opportunities by calculating for each municipality its distance from the metropolitan center. To obtain a comparable indicator of access to employment, the density of the central city was included in the central-city equation. Finally, we logged the education variable, because we made the assumption that the effects of expenditure increments decline with every expenditure increase. The last dollar spent on educational services purchases less in benefits than the first dollar.

The results of the regression analysis for both the suburban and central-city samples is reported in Table 3. The two major findings confirmed our central hypotheses. First of all, educational expenditures had a significant, positive effect on suburban property values in the Chicago metropolitan area. Note that this effect was apparent even in our large sample of heterogeneous suburbs, many of which bore little resemblance to the bedroom communities to which some other studies have been limited. [39] But if education appears

Table 3. Determinants of Property Values in Central Cities and Suburban Areas

Type of Community	Determinants of Property Values								
	Educational Expenditures (Logged)	Tax Rates	Income	% New Homes	Access to Employment[1]	Size of House	Population Size	Constant	R^2
Central Cities									
Unstandardized b Coefficient	.67	-.60*	.003**	.09**	-.04**	-4.63**	-.009**	7.17	.73
Standardized Beta Coefficient	.03	-.11	.81	.24	.32	-.34	-.13		
Chicago Suburbs									
Unstandardized b Coefficient	7.46**	-1.50	.003**	7.50**	-.01	.38	.6**	-56.02**	.90
Standardized Beta Coefficient	.12	-.06	1.04	.13	-.01	.04	.08		

1. Access to employment is measured in central cities by population density; in suburbs, it is measured by the number of miles the community is from the central business district of Chicago.

* Statistically significant at the .05 level.

** Statistically significant at the .01 level.

to be at least a somewhat developmental policy in suburbia, the impact of central-city school expenditures on property values had no significantly positive effects. The difference between the substantial effects in the suburbs and the trivial ones in the central cities is statistically significant.[40] Apparently, suburban school expenditures are positively valued by the market, while central-city expenditures are not. Secondly, taxes had a negative effect on property values in both central cities and suburbs. Although the negative effect was slightly larger in suburbs than in central cities, the difference was not statistically significant.[41]

On the basis of this evidence, it is reasonable to conclude that big city schools do little to enhance the local economy. Even when local tax rates are controlled, it is difficult to discern any significantly positive effect on property values associated with increases in educational expenditures. By contrast, the operations of suburban school systems seem to have a positive effect when other variables are controlled. Admittedly, the positive effects of expenditures in suburbia were at least partially offset by the negative effects of increased taxes. But that still leaves the suburban communities better off than the central cities where increments in school taxes negatively affect property values without any compensating positive effects induced by increments in school expenditures.

Two factors preclude central-city school systems from helping the local economy. First, cities provide much the same schooling services to all children throughout the city without regard to differences in schooling preferences. Suburban schools, under the

direction of different school boards and administrators, provide more varied alternatives among which consumers may choose by migrating to the community whose schools they most prefer. Second, those who pay for central-city education are often different from those who receive the benefits that are distributed. The re-distributive tendencies of central-city school policies lower the ratio of benefits to taxes received by the average taxpayer. For the more prosperous member of the central city, the suburban alternative must appear relatively attractive.

Reconsideration of Black-White Differences in Coleman Study

If central city schools emphasize redistribution and suburban schools emphasize development, then differences between these two types of educational systems should be evident in Coleman's study of the effect of families and schools on verbal ability. In the published literature on the Coleman study there is no direct examination of the differential effects of central-city and suburban school systems. However, many comparisons between blacks and whites have been systematically examined. Since in the Coleman sample only 32 per cent of the white children in the North attended central-city schools, whereas 79 per cent of the black children did, it may be possible to make some inferences about differences between cities and suburbs on the basis of differential findings between blacks and whites. If there are differences between central city and suburbia, these should be reflected in differential patterns of correlation among blacks as compared to whites.

First, one expects to find generally weaker relationships between home background variables and educational achievement among blacks than among whites. Since whites attend an educational system that develops local economies, schools can be expected to reinforce existing social class differences. Since blacks attend a more

egalitarian educational system the impact of social class on educational performance will be weaker. As the reader may recall, Table 1 in fact shows that family background differences account for less of the variation among blacks than among whites. It also shows that the amount of variance explained by school factors independent of family background factors is somewhat greater for blacks than for whites.

This finding is supported by the data in Table 4, which provides unstandardized regression coefficients for each of the four family background characteristics that best measure the class background of pupils. I present the unstandardized regression coefficients because they permit direct comparisons across racial groups and grade levels for each of the family background variables.[42] When these comparisons are made, it is clear that for every grade level family background characteristics have a more powerful effect on the performance of whites than blacks.

There is a second finding which is more weakly supported by these data. Recall my previous argument that in a school system pursuing a developmental policy family background characteristics become increasingly powerful explanatory variables over time, while in a redistributive system the relationships between family and educational performance steadily decrease. Examine Table 1 once again, this time noticing the changes over the time a child remains in school. For blacks, home variables, relatively weaker even in Grade 6, decline even further in grades 9 and 12. At the same time, the unique contributions of school and teacher variables increase over time. For whites family background factors remain powerful, and in fact they even increase slightly in importance. The data in Table 5

Table 4. Regression Coefficients for Four Family Background Variables, Controlling For Four Sets of Schoolwide Variables.

Family Background Characteristic	Blacks			Whites		
	Grade 6	Grade 9	Grade 12	Grade 6	Grade 9	Grade 12
Reading Material	1.4x	1.6x	1.0	2.7x	3.2x	5.0x
Economic Well Being	2.2x	1.0	0.6	2.8x	1.6	-.1
Structural Integrity	0.6	1.1x	0.7	1.2x	1.9x	0.7
Education	1.0x	1.3x	2.4x	2.4x	3.7x	3.2x

x Statistically significant at .05 level

Data selected from Smith, "Basic Findings Reconsidered", Table 12, p. 267.

is not inconsistent with these findings. By the 12th grade only one of the home background variables remains statistically significant for blacks, while for whites two of the family variables were more important for the oldest students than they were for the youngest.

In the data presented thus far. the dependent variable has been the total amount of variation in pupil achievement. This total can be analytically separated into two parts: the amount of variation in pupil achievement that occurs within any single school, and the amount of variation that occurs among schools. It is this second aspect - the variation that occurs among schools - or what Coleman calls the between-school variance - that is most relevant to my discussion of the differences between suburbs and central cities. The greater variation among schools in suburbia, as compared to the central city, provides the basis for my suggestion that suburban schools are developmentally oriented and central city schools have more redistributive policies. The best test of my hypothesis, therefore, is an examination of the extent to which family background factors account for the between-school variation in pupil achievement.

Fortunately, published data is available on the between-school variation accounted for by family background characteristics.[43] As can be seen in Table 5, the data strongly confirm my hypothesis. For whites, between-school variation is largely explained by family background characteristics, and the amount of variation explained increases over time. Since they attend suburban schools operating in accord with developmental policies, class differentials increase. For blacks the amount of between-school variation is much lower, and it declines as the child progresses through the educational system. Since they attend central-

Table 5. Percent of Between-School Variance Accounted for by Family Background Characteristics of Northern Whites and Blacks

	Grade 6	Grade 9	Grade 12
	(Percent of Variance Explained by Family Background)		
Whites	54.2%	65.9%	64.1%
Blacks	37.1	31.3	30.2

Data selected from Smith, "Basic Findings Reconsidered", Table 7, p. 259.

city schools with redistributive policies, class differentials, never great in the beginning, ebb away.

Conclusions

Not all local governments are equally well equipped to pursue their economic interests. Small suburban towns are the most adept at maximizing the value of their community property, for they can modulate their local policies to suit the particular preferences of a relatively small number of residents. Through zoning laws they may even be able to achieve roughly equal contributions in taxes from all residents, therefore, minimizing inter-resident variability in the benefit/tax ratio. The most favorably placed of these suburbs can then attract the most productive elements in the metropolitan area. Indeed, some luxury suburbs are so well-placed that they need not give paramount place to the strictly economic interests of the community. Instead, they may become more concerned about its social standing. Once a satisfactory economic base is insured, some communities can zone out unpleasant, though productive, economic activities in favor of quiet, residential gardens that become the most socially exclusive preserves in the metropolitan area. High-quality public serivces can be provided to all residents without any resident suffering a particular adverse benefit/tax ratio because all residents pay roughly the same amounts for the service. Redistribution is kept to a minimum.

The central city cannot afford to be concerned about such social snobbery. The fundamental economic base is far too pressing a concern. Yet it services such a large and diverse set of residents that it cannot escape from engaging in a considerable degree of redistribution. To some degree, service provision can be differentially provided among neighborhoods, so that the well-to-do, who pay more

in taxes, receive more in services. But the central city is limited in its capacity to allocate resources differentially. In the first place, constitutional stipulations require that governments treat citizens in similar circumstances in much the same way. Great differentials in public service provision that corresponded to the great differentials in taxes paid could probably not stand a constitutional test. In suburbia, however, the separation of government into many small, competing parts allows for varying levels of service that have not been successfully challenged on constitutional grounds. Secondly, the administrative procedures of large organizations required to provide central-city services demand a standardization of product delivery. Partly because bureaucracies are committed to universalistic norms, partly because bureaucracies want to protect themselves from political pressures, and partly because administrative efficiency requires the implementation of standard operating routines throughout the organization's geographical reach, central cities tend to provide similar services throughout their jurisdictions. With uniformity comes redistribution, and with redistribution comes damage to the city's economic interests. By comparison, one finds in suburbia many administrative jurisdictions, each with their own policies, servicing divergent populations at a multiplicity of different levels. Redistribution in service-delivery is once again kept to a much reduced level.

These points have been illustrated by the case of education, the largest and most costly of local government services, and the one for which the highest quality (though still imperfect) set of data on policy consequences is available. Yet the findings seem generalizable to a wide range of policy areas. What is characteristic of central-city schools is probably also characteristic of central city fire departments, sanitation departments,

recreation programs, park districts, and street maintenance programs. There will of course be some inequality in the benefits received from these services. The higher-income groups who pay more in taxes probably receive more of the benefits. Their streets are probably cleaner, their parks are probably more conveniently located and better maintained, and their garbage may be collected more efficiently. But even though services are not equal in central cities, at least some redistribution seems to occur. The tendency to uniformity in service provision precludes a careful calibration that relates benefits received to taxes paid along the lines that seem quite feasible in suburbia. And it is the comparative position of cities to suburbs that leaves the former less well equipped to pursue their economic interests.

At one time these differentials between cities and suburbs were a minor nuisance. Because cities were located at the nodal points of fixed water and rail transportation networks, they monopolized the most valuable land in the region. Whatever differences in local tax and expenditure policies, these weighed relatively little on a scale where the physical location of cities sat so heavily. The largest and most powerful of cities could exploit the great wealth their location generated to provide a level of public service provision that far outstripped the outlying communities. At the turn of the century and even up to World War II, the comparative advantage lay so one-sidedly with central cities that they could ignore the impact of a suburbia that had found a way of escaping the costs of redistribution.

The changed transportation and communication systems of the post-war period have challenged the dominance of central cities. Transportation systems are no longer fixed, streets and highways now connect almost all spaces in a metropolitan area in a more or less even-handed way, and no community has a monopoly on critical land in the way central cities once did. The level of inter-community competition both within metropolitan areas and among them has greatly increased. What governments do to enhance the economic well-being of their communities has become much more critical.

Central cities have been slow to recognize these changes in their economic and physical environment. Their policies reflect the prosperous period when they were initially developed, and they are now only slowly adapting to the more difficult competitive period in which they now find themselves. The luxury of re-distribution which was once possible is becoming increasingly difficult to sustain. They are beginning to cut back the most ostentatious features and are asking the federal government to assist them with others. In the meantime, the process of migration from central cities continues, as residents search for a locale where they can receive the most for what they pay in taxes. As a doctor friend of mine said recently, "I don't mind paying taxes here (in a small Wisconsin town) because you see your taxes working for you". By comparison, the big city he had left behind had given hima most unfavorable benefit/tax ratio.

FOOTNOTES

1. At the same time the demand/supply ratio of the average taxpayer is always less than 1.0. Almost everyone is willing to pay more in taxes for some public service not presently provided. The matter is discussed more fully in Peterson, 1979.
2. Ibid.
3. Heidenheimer, Comparative Public Policy.
4. Peterson, 1979.
5. This definition of an efficient school system assumes no societal returns to education other than those for which those who incur the costs are compensated. It assumes there are no ripple or neighborhood effects, which otherwise would justify public subsidy of education. Although some educational economists have argued that such ripple effects exist, their evidence is dubious. Although more and better education provides individuals with credentials that allow them to jump ahead of others in the queue for the higher paying and more prestigious occupations, it is much less clear that societal productivity, taken as a whole, increases more by investments in human than in physical capital. And only societal benefits above and beyond those received by individuals in return for their own educational investments provide a warrant - by the efficiency criterion - for publicly subsidized education.

Efforts to reduce poverty through manpower retraining illustrate the point. Although one can show that individuals trained in such programs jump the unemployment queue and receive increased earnings at least over the short run, their employment only displaces other workers, unless the training program has somehow increased the overall employability of the workforce. When this does not occur, it is just a game of "musical chairs". And even if the net effect is to increase productivity - more chairs are added to the game - this does not make efficient any public subsidy unless the societal benefits are greater than the sum total of benefits received by the individuals who paid for their training. (On these issues, compare Psacharoupolous, Returns to Education; Becker, Human Capital; Jencks et al., Inequality pp 220-225; Levin, "A Decade of Policy Developments"; Thurow, "Education and Economic Equality".)

6. Coleman, et al., Equality of Educational Opportunity.

7. Performance on verbal ability tests is strongly correlated with performance on a wide variety of other school achievement tests; it is also correlated with access to other valued things - more income, high prestige occupation, access to institutions of further education. (Jencks et al. Inequality)

8. Smith, "Basic Findings Reconsidered"; Jencks, "The Conventional Wisdom".
9. Bidwell and Kasarda in "Conceptualizing and Measuring the Effects of School and Schooling", have demonstrated the crudeness of the measures of school variables quite convincingly. They note that the school variables are collected at one level of analysis, while the family background and pupil achievement variables are collected at another. The first are collected at the level of the school as an organization or the school district as a system, while achievement and background variables are collected at the level of the individual. If the background variables had been collected only at the level of the school - e.g., school-wide averages of mother's education - their capacity to predict pupil achievement would have been no better than many of the teacher and school characteristic variables.
10. Heyns, "Social Selection and Stratification within Schools"; Alexander and McDill, "Selection and Allocation within Schools".
11. Alexander and McDill, "Selection and Allocation"., pp 977-79.
12. Summers and Wolfe, "Do Schools Make a Difference?"
13. Morgan et al., Income and Welfare in the United States.

14. We do not include Coleman's controversial data on the effects of the school environment, because of the possibility that these effects are a function of differential selection rather than the effects of any actual peer-group influence. See Smith's interesting discussion in "Basic Findings Reconsidered", pp 269-81.

15. Coleman et al., Equality of Educational Opportunity, p.164

16. Ibid. p.165.

17. One might reply that the correlation between family background and verbal ability is already present at the beginning of Grade 1, before schooling has occurred. There are at least three difficulties with this position: 1) Coleman's data for Grades 1 and 3 are not very reliable, as Coleman (1972) himself admits (p.164; see also Smith, "Basic Findings Reconsidered", p.250). 2) Coleman's data, while unreliable, in fact show an increasing correlation between family background and verbal ability over time - just as one would expect an efficient school system might produce. 3) It is difficult to assert that relevant aspects of family background are identical for pre-school years and for years after schooling begins. That a strong relationship between family background and verbal ability is evident at age 6 does not mean that same relationship would obtain at age 18 in the absence of schooling.

18. Tiebout, "A Pure Theory of Local Expenditures".

19. Miner, Social and Economic Factors in Spending for Public Education.

20. Miner, Social and Economic Factors..; James, Thomas and Dyck, Wealth, Expenditure and Decision-Making for Education; Sacks, Harris and Carroll, State and Local Government: The Role of State Aid in New York; James, Kelly and Garms, Determinants of Educational Expenditures in Large Cities of the United States; Hickrod, "Local Demand for Education".

21. Grubb and Michelson, States and Schools, p.55.

22. Ibid. p.56

23. Hirsch, "Determinants of Public Education Expenditures".

24. Sacks and Hellmuth, Financing Government in a Metropolitan Area.

25. Fisher, "Local Determinants of Per Pupil Expenditures in Suburban High School Districts; O'Shea, "The Impact of Political Leadership on Educational Policy"; Harvey, "Property Tax Determinants of Educational Expenditures".

26. Rosen and Fullerton, "A Note on Local Tax Rates, Public Benefit Levels and Property Values"; McDougall, "Local Public Goods and Residential Property Values".

27. Oates, "The Effects of Property Taxes and Local Public Spending on Property Values"; Rosen and Fullerton, "A Note on Local Tax Rates.."; Meadows, "Taxes, Spending and Property Values"; Edel and Sklar, "Taxes Spending and Property Values". In Pollakowski's study of the San Francisco Bay area ("The Effects of Property Taxes and Local Public Spending on Property Values") the results were inconclusive, but this study was hampered by an inadequate sample size (19 cities).

28. Callahan, Education and the Cult of Efficiency; Tyack, The One Best System; Peterson, School Politics Chicago Style.

29. Burkhead, et al., Input and Output in Large City High Schools.

30. Katzman, The Political Economy of Urban Schools, pp 135-36.

31. Levy, et al., Urban Outcomes.

32. Katzman, The Political Economy of Urban Schools, p.144.

33. Grubb and Michelson, States and Schools, pp 64ff.; Owen, "The Distribution of Educational Resources in Large Cities"; Burkhead, Input and Output in Large City High Schools.

34. Hanushek, Education and Race; Murnane, The Impact of School Resources on the Learning of Inner City Children and Summers and Wolfe, "Do Schools Make a Difference", find that experience positively affects high achievers, negatively affects low achievers.

35. Owen, "The Distribution of Educational Resources..." p.33.

36. Ibid. p.33 fn.

37. This section is adapted from Paul E. Peterson and Susan Sherman, "The Impact of Property Taxes and Educational Expenditures on Property Values in Central Cities and Suburban Communities" (Unpublished manuscript, University of Chicago, 1978). I appreciate Susan Sherman's permission to use this material here.

38. Ibid.

39. Oates, "The Effects of Property Taxes and Local Public Spending on Property Values". Also see citations in footnote 24.

40. In a pooled regression, the difference in the b coefficients was significant at the .01 level of confidence, as calculated by the t statistic.

41. The difference in the be coefficients was insignificant at the .05 level of confidence.

42. However, the data in this form do not permit any comparisons among the relative importance of the four family background characteristics.

43. Smith, "Basic Findings Reconsidered".

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